

Amendments to the Claims

Claims 1-17 (Canceled)

Claims 18 (Previously Presented) An information recording apparatus for recording information to an information recording medium for storing at least two objects containing multiplexed encoded video data and encoded audio data, and management information for managing the at least two objects,

the video data including intra-coded picture data and inter-coded picture data,

the at least two objects including at least a first object and a second object,

the first object being an object for which a location of the intra-coded picture data in the object is managed by the management information,

the second object being an object for which a location of the intra-coded picture data in the object is not managed by the management information,

the management information being information for separately managing the first object and the second object, and including map information for each first object, and

the map information correlating a playback time of the corresponding first object with the location of the intra-coded picture data included in the corresponding first object,

the apparatus comprising:

an interface for inputting an object from an external part;

a generating section for generating management information corresponding to the input object; and

a recording section for recording the input object and the management information to the information recording medium,

wherein the generating section includes

a detection section for determining if a block contained in the input object includes intra-coded picture data, and

a producing section for producing the management information containing map information based on a result from the detection section,

wherein the management information has, as information to identify the first object and second object, a validity flag which indicates whether the map information for each first object and second object is valid, and

wherein the generating section is further for
determining whether the input object is a first object or a second object,

generating the management information including the map information for the first object, and setting the validity flag in the management information to a valid state, when the input object is determined to be a first object, and

generating the management information for the second object, and setting the validity flag in the management information to an invalid state, when the input object is determined to be a second object.

Claim 19 (Canceled)

Claim 20 (Previously Presented) A method of recording information to an information recording medium for storing at least two objects containing multiplexed encoded video data and encoded audio data, and management information for managing the at least two objects,

the video data including intra-coded picture data and inter-coded picture data,

the at least two objects including at least a first object and a second object,

the first object being an object for which a location of the intra-coded picture data in the object is managed by the management information,

the second object being an object for which a location of intra-coded picture data in the object is not managed by the management information,

the management information being information for separately managing the first object and the second object, and including map information for each first object, and

the map information correlating a playback time of the corresponding first object with the location of the intra-coded picture data included in the corresponding first object,

the recording method comprising:

inputting the object from an external part;

generating management information for the input object; and

recording the input object and the management information to the information recording medium,

wherein the generating includes

detecting whether the input object is a first object or a second object, and if the input object is a first object, determining if a block contained in the input object includes the intra-coded picture data, and

producing the management information containing the map information based on a result of the determining,

wherein the management information has, as information to identify the first object and the second object, a validity flag which indicates whether the map information for each first object and second object is valid, and

wherein the generating further includes

determining whether the input object is a first object or a second object,

when the input object is determined to be a first object, generating the management information including the map information for the first object, and setting the validity flag of the management information to a valid state, and

when the input object is determined to be a second object, generating the management information for the second object, and setting the validity flag in the management information to an invalid state.

Claims 21-27 (Cancelled)

Claim 28 (New) An information recording medium for storing at least two objects containing multiplexed encoded video data and encoded audio data, and management information for managing the at least two objects, wherein

the video data includes intra-coded picture data and inter-coded picture data,

the at least two objects include at least a first object and a second object,

the first object is an object for which a location of intra-coded picture data in the object is managed by the management information,

the second object is an object for which the location of intra-coded picture data in the object is not managed by the management information,

the management information is information for separately managing the first object and the second object, and includes map information for each first object,

the map information correlates a playback time of the corresponding first object with the location of intra-coded picture data included in the corresponding first object, and

the management information has, as information to identify the first object and second object, a validity flag which indicates whether the map information for each first object and second object is valid.

Claim 29 (New) The information recording apparatus according to claim 18, wherein the management information includes path information for indicating a playback sequence of the object, the path information managing a time domain of the object, and the map information is a map for converting the time domain of the object to an address domain of the object.

Claim 30 (New) The method according to claim 20, wherein the management information includes path information for indicating a playback sequence of the object, the path information managing a time domain of the object, and the map information is a map for converting the time domain of the object to an address domain of the object.

Claim 31 (New) The information recording medium according to claim 28, wherein the management information includes path information for indicating a playback sequence of the object, the path information managing a time domain of the object, and the map information is a map for converting the time domain of the object to an address domain of the object.